



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--------------------------|-------------|----------------------|---------------------|------------------|
| 10/632,499 | 08/01/2003 | Frank Olschewski | 21295.59(H5644US) | 4405 |
| 29127 | 7590 | 09/05/2008 | | |
| HOUSTON ELISEEVA | | | | |
| 4 MILITIA DRIVE, SUITE 4 | | | | |
| LEXINGTON, MA 02421 | | | | |
| EXAMINER | | | | |
| ROSARIO, DENNIS | | | | |
| ART UNIT | | PAPER NUMBER | | |
| 2624 | | | | |
| MAIL DATE | | DELIVERY MODE | | |
| 09/05/2008 | | PAPER | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/632,499

Applicant(s)

OLSCHEWSKI, FRANK

Examiner

Dennis Rosario

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2008.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-11 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 01 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. The amendment was received on 6/17/08. Claims 1-11 are pending.

Response to Arguments

2. Applicant's arguments filed 6/17/08 have been fully considered but they are not persuasive.

Applicants state that Fogg cannot be modified with Nybo since Fogg uses original captured images which suggest that Nybo does not use original captured images. And such a combination of original images with non-original images is not compatible as suggested by the applicants. The examiner notes that Fogg uses both "directly-supplied ('raw') and...intermediary processed data bitstream elements" in col. 12, lines 59-64. Thus, a combination of Fogg's teaching of using both raw images also known as original captured images with non-original images also known as intermediary processed data bitstream elements such as MPEG with Nybo's non-original images is reasonable.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fogg (US Patent 6,466,624 B1) in view of Nybo et al. (US Patent Application Publication No. : US 2001/0052933 A1).

Regarding claim 7, Fogg teaches an arrangement for optimizing the image quality of movable subjects imaged with a microscope system, comprising:

- a) at least one objective defining an image window,
- b) a detector unit for optically acquiring images each image optically acquired by the detector unit having a plurality of pixels, and
- c) a computer system (fig. 5,num. 500) comprising:
 - c1) a means for determining a respective displacement vector field ("bitstream vec-tors" in col. 3, lines 12,13) from a comparison of the respective pixels of at least two chronologically successive images (fig. 8B,numerals 811 and 812 where one image corresponds to "the current picture" in col. 3, line 15 and the other image corresponds to a "reference picture" in col. 3, line 16 that include a comparison between both images in order to "closely resemble the current picture" in col. 3, line 15) optically acquired by the detector unit,
 - c2) a means for identifying a trajectory (fig. 10c,num. 1026 corresponding to fig. 6, num. 606) for each pixel of the images optically acquired by the detector unit from the displacement vector fields (fig. 10c, num. 1021 that has incomplete vector fields as discussed in col. 15, lines 50-65), and

c3) a means for applying an operation (fig. 11F,num. 1054 corresponding to fig. 6, num. 607) to the images optically acquired by the detector unit along the identified trajectory (as determined in fig. 6, num. 606).

Fogg does not teach limitations a) and b) and the newly amended underlined portions of limitation c) above, but does teach "clues...to the nature of the captured video source and encoder-based processing" in col. 12, lines 66 to col. 13, line 1. Thus, Fogg suggests that the video source is not known since clues are needed to determine the nature of the video source and associated encoder-based processing, and the video source and associated encoder-based processing can be anything that provides a video source with encoder-based processing from which clues are to be determined from the combination of the video source and associated encoder.

Nybo teaches such a source with associated encoder processing as shown in fig. 1,num. 112 as the source and fig. 1,num.120 as the encoder that uses "MPEG" in paragraph [0042] and teaches limitations a) and b) that describe features of a microscope known to one of ordinary skill in the art of microscopes as disclosed in Nybo in [0034], last word.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Fogg's teaching of obtaining clues about Nybo's source 112 with encoder 120, because Nybo's source has medical and scientific value.

Regarding claim 8, Fogg discloses the arrangement as defined in claim 7, wherein the means for applying an operation to the images optically acquired by the detector unit along the identified trajectory is chosen from:

- a) a deconvolution means,
- b) a smoothing means,
- c) an averaging filter, or
- d) a means for (fig 11F, num. 1118) operation acting in time-lateral (fig. 11F, num. 1054: "...temporally") fashion.

Regarding claim 9, Fogg discloses the arrangement as defined in claim 7, further comprising:

- a) a first image memory (fig. 6,num. 601) storing the images optically acquired by the detector unit;
- b) a trajectory memory (fig. 5,num. 517) storing trajectory data obtained from the images optically acquired by the detector unit; and
- b) a second image memory (fig. 6, upon the output of fig. 6, num. 609: "Storage") storing the images created by the correlation (or "correlate" in col. 18, line 41) of the images from the first image memory with the trajectory data from the trajectory memory (fig. 5,num. 517).

Regarding claim 11, Fogg discloses software on a data medium (fig. 5,num. 507), wherein the software cause a microscope system to carry out a method as defined in claim 1.

Claims 1 and 2 are rejected the same as claims 7 and 8. Thus, argument similar to that presented above for claims 7 and 8 of an arrangement is equally applicable to claims 1 and 2 of a method.

Regarding claim 3, Fogg discloses the method defined in claim 1, wherein

- a) the images optically acquired by the detector unit are conveyed to an image memory (fig. 6, num. 601); and
- b) data obtained from the images optically acquired by the detector unit is conveyed to an optical flow calculator (fig. 10A, num. 1001 outputs "Optical Flow Metrics" as shown upon the output of fig. 10A, num. 1001), to a trajectory tracker (fig. 10C, num. 1026), and to a trajectory memory (fig. 5, num. 517).

Regarding claim 4, Fogg discloses the method as defined in claim 3, wherein for the application of the operation, the images optically acquired by the detector unit are retrieved from the image memory (via fig. 6,num. 602) and corresponding trajectory data is retrieved from the trajectory memory (fig. 5,num. 517)in a correlated way (or "correlate" in col. 18, line 41).

Regarding claim 5, Fogg discloses the method as defined in claim 4, wherein the data generated by application of the operation is conveyed to a second image memory (fig. 6, upon the output of fig. 6, num. 609: "Storage").

Regarding claim 6, Nybo of the combination teaches the method as defined in claim 1, wherein the microscope system contains a scanning microscope or a conventional microscope ("microscope" in [0034], last word).

- a) a conventional microscope (or "microscope" in paragraph [0034], last line).

Claim 10 is rejected the same as claim 6. Thus, argument similar to that presented above for claim 6 of a method is equally applicable to claim 10 of an arrangement.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Rosario whose telephone number is (571) 272-7397. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella can be reached on (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dennis Rosario/
Examiner, Art Unit 2624

/Matthew C Bella/
Supervisory Patent Examiner, Art
Unit 2624